Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte RAJ J. MEHTA, ASHOK J. MEHTA,
and SUNIL TALATI

_____

Appeal No. 2000-1872
Application No. 09/087,746

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ON BRIEF

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Before WILLIAM F. SMITH, ROBINSON, and SCHEINER, Administrative Patent Judges.

ROBINSON, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 - 20, which are all of the claims pending in this application. Claims 1 and 17 are illustrative of the subject matter on appeal and read as follows:

1. A water-soluble or water dispersible composition for the treatment of a natural body of water onsiting essentially of

A) a quantity of beneficial aerobic microorganisms that will eliminate or reduce the quantity at least one of an organic pollutant, an algae, and a weed in at least a portion of said body of water;

B) a quantity of at least one water-soluble colorant sufficient to prevent or minimize the photosynthesis of at least one of an algae and a weed; wherein said colorant is essentially non-toxic to fish ad other desireable aquaic life;

C) a growth accelerating quantity of a growth accelerator for component A) that accelerates the growth and reproduction of the component A) microorganisms.

17. A solid form composition of claim 1 wherein at least one of components A) and B) are encapsulated in a water-soluble coating in the form of spheres or capsules or microencapsulated as a free flowing powder.

A) and B) is encapsulated in a water-soluble coating in the form of spheres or capsules or microencapsulated as a free flowing powder.

The references relied upon by the examiner are:

Wilson	4,042,367	Aug. 16, 1977
Bok et al. (Bok)	5,273,749	Dec. 28, 1993
Diamond	5,492,881	Feb. 20, 1996
Levy	5,679,364	Oct. 21, 1997

Grounds of Rejection

Claims 1 - 16, 19, and 20 stand rejected under 35 U.S.C. § 102 (b). As evidence of anticipation, the examiner relies upon Diamond.

Claims 1 - 20 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner relies upon Levy, Bok, and Wilson.

We reverse both rejections for the reasons that follow.

Background

The applicants describe the invention at pages 1 and 2 of the specification as being directed to compositions which contain an effective quantity of beneficial aerobic microorganisms, an effective quantity of at least one water soluble colorant, and, optionally, an effective quantity of growth accelerators for the microorganisms. The compositions are stated to be useful in the treatment of natural bodies of water to control organic pollutants, algae, and/or weeds.

Discussion

In considering the issues raised by this appeal we have carefully considered the positions of the examiner as set forth in the Examiner's Answer of June 1, 2000 (Paper No. 12) and the appellants' position as set forth in the Appeal Brief filed February 17, 2000 (Paper No. 11) and the Reply Brief filed June 23, 2000 (Paper No. 13).

Opinion

The rejection under 35 U.S.C. § 102(b)

In rejecting claims 1 - 16, 19, and 20 as anticipated by Diamond, the examiner has relied upon Diamond as teaching the presently claimed composition stating "[t}he essential components are A) microbes to digest (the claim 1 instant ‘eliminate’ or ‘reduce’) oil (the instant claim 1 organic pollutant) B) a dye (the instant claim 1 colorant: C) nutrients, nitrogen and phosphorus for Reproduction of the microbes-in other words, in the instant claim 1 language - a growth accelerating quantity of a growth acceleration for component

A- microbes." (Answer, page 3). While the examiner acknowledges that the compositions of Diamond additionally include a fire retardant and finely ground cellulose, the examiner concludes that "[t]hese do not impart in effect functionality to Diamonds invention, and would not do so to the instant invention." (Id.). The examiner additionally notes that the composition described by Diamond is "biodegradable, non-toxic, non-irritating and is safe to humans, plants and animals . . ." (Id.).

Appellants argue, in pertinent part, that Diamond does not describe "a non-toxic water soluble colorant sufficient to prevent or minimize the photosynthesis of at least one of an algae or a weed;" (Brief, page 8) (Emphasis in the original.) but rather includes a colorant in order "to impart product identification to the cellulose base . . . ." (Id.) (Emphasis in the original.). Further, appellants urge that the language "consisting essentially of" does not permit the inclusion of a hydrophobic sorbent material . . . . (Id.). Having considered the claims, the disclosure of Diamond, and the respective arguments of the examiner and appellants, we agree with appellants that Diamond fails to anticipate the claimed composition. Anticipation requires the disclosure, in a single prior art reference, of each element of the claim under consideration. W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). On this record, the examiner has not provided the facts and evidence which would reasonably support the conclusion reached. We recognize that Diamond would suggest

compositions which include microorganisms useful in bioremediation processes and even directs one to water treatment (column 9, lines 57-59 and column 10, lines 36-40). It is with respect to the water-soluble colorant which the claim 1 requires to be present in a quantity sufficient to prevent or minimize the photosynthesis of at least one of an algae and a weed, that Diamond is lacking. The examiner has offered no evidence or reasoning which would reasonably suggest that the colorant of Diamond, which could be green food coloring, and is present in an amount "to achieve the desired degree of green color to impart adequate product identification to the cellulose base" (column 7, lines 26-27) would correspond to the amount of colorant required by the claimed composition. Further, Diamond would appear to suggest that the colorant is in someway associated with the cellulose base in a manner which would not permit it to function in an aqueous environment in the manner described for the invention. The appealed claims are not directed to merely a composition which contains the prescribed ingredients, but include limitations that these ingredients be present in specified amounts. Diamond may include each of the ingredients, but does not describe or suggest that aspect of the claims which requires that the water-soluble colorant be present in a quantity sufficient to prevent or minimize the photosynthesis of at least one of an algae and a weed. Thus, Diamond does not disclose each element of the claims under consideration.

While we might agree that the bioremediation composition of Diamond is similar to

that presently claimed, it remains that the reference does not describe each element of the claimed invention. Thus, we are persuaded that Diamond does not describe a composition which corresponds to that which is required by the claims. We, therefore, reverse the rejection of the appealed claims 1 - 16, 19, and 20 under 35 U.S.C. § 102.

The rejection under 35 U.S.C. § 103

The examiner has rejected claim 1 - 20 (Answer, pages 5-6) under 35 U.S.C. § 103 as being unpatentable over Levy, Bok, and Wilson. The examiner urges that Levy describes microbial agents with growth accelerating agents useful in the control or reduction of organic pollutants. The examiner, additionally, urges that colorants are present in these compositions, since Levy describes the use of UV protectors which would be expected to reduce sun light and thus photosynthesis of unwanted algae and/or weeds. The examiner acknowledges that Levy does not teach all of the instant forms, ingredients or concentrations as required by the claims. (Answer, page 5). However, the examiner relies on Bok as providing microbes for pollution control in water and as disclosing the specific nutrients and cell concentrations which Levy addresses in a general manner. The examiner relies on Wilson as describing the use of dyes and colorants, of the type required by the present claims, for algae and/or weed control, in a manner which makes use of competitive absorbance of light which affects the photosynthetic process. (Id.).

The examiner concludes (Answer, page 6):

> [i]t would have been obvious to a person of ordinary skill in the art at the time the invention was made desiring to utilize a remediation composition, to use one of Levy modified with specific components to provide acceptable

> application. Bok teaches one having ordinary skill in the art would be motivated to perform this modification in order to have more microbes, while Wilson teaches how to kill algae. Motivation would be evident to aquatic practitioners: one application removes both organic and algae pollutions in compatible means.

Even if we assume for the purpose of argument that each of the references describes that which the examiner states, it remains that the examiner has provided no substantive evidence or reason to be found in the prior art which would reasonably suggest to one of ordinary skill in this art that each of these elements should have been brought together into a single composition as presently claimed. While Levy may well describe remediation of organic pollutants using microorganisms, the colorant described is not a colorant, but a UV protectant and there is nothing which would suggest that this UV protectant is present in an amount which would prevent or minimize the photosynthesis of an algae or weed. As appellants have argued, such substances would be expected to be colorless or white and would not be expected to block or absorb visible light in a manner to interfere with a plant's photosynthesis. (Brief, page 13).

Similarly, Wilson would reasonably appear to describe the use of colorants in water systems to kill algae, but provides no description which would reasonably be read to suggest the use of this system in conjunction with a microbial system of the type described by Levy for a remediation process.

To the extent that the examiner urges that one of ordinary skill in this art would be motivated to combine these two methods so as to permit "one application [which] both organic and algae pollution, in compatible means," (Answer, page 6) it is sufficient to note

that the examiner has provided no evidence which would suggest the presence of organic pollutants and undesirable algae or weeds in the same location where one would recognize that such a need exists. Also, to the extent that the examiner urges that "[t]he selection of each ingredient and concentration is a result effective parameter chosen to obtain the desired effects," we would note that the examiner has not provided the facts or evidence which would reasonably establish any of the parameters of the appealed claims to be "result effective variables" subject to optimization. We note that the burden is on the examiner to provide a reason, based on the prior art or knowledge generally available in the art, as to why it would have been obvious to one of ordinary skill in the art to arrive at the claimed invention. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 297, n.24, 227 USPQ 657, 667, n.24 (Fed. Cir. 1985). Here, we find no reason stemming from the prior art, and the examiner has not provided the substantive evidence, which would have led a person having ordinary skill to the claimed invention. In our judgment, the only reason or suggestion to modify either Levy or Wilson in the manner proposed by the examiner comes from appellants' specification. Accordingly, we reverse the rejection of claims 1 - 20 under 35 U.S.C. § 103 as unpatentable over Levy, Bok and Wilson.

Other Issues

In reviewing the record of this application for purposes of considering this appeal, we could not help but note that the file record does not indicate that a patent search had been performed in Class 435 of the U.S. Patent Classification System. It would appear that class 435, subclasses 260 and 260.2 would be particularly relevant to the presently

claimed subject matter. Subclass 435/260 provides for subject matter directed to a

> Process of utilizing an enzyme or microorganism to destroy hazardous or toxic waste, liberate, separate, or purify a preexisting compound or composition therefore, cleaning objects or textiles

and

Subclass 435/262.5 provides for subject matter directed to the

> Destruction of hazardous or toxic waste: This subclass is indented under subclass 262. Process wherein hazardous or toxic waste is destroyed or converted into an environmentally safe substance.

Both of these subclasses would appear to be part of a complete evaluation of the prior art relevant to the presently claimed invention.

In addition, we would call the examiner's attention to U.S. Patent 6,057,268, which issued May 2, 2000 to Mehta. (Copy Attached.)

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

WILLIAM F. SMITH Administrative Patent Judge	)
DOUGLAS W. ROBINSON Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
TONI R. SCHEINER Administrative Patent Judge	)

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